

Low Impact Development (LID) Ordinance

AN ORDINANCE regulating stormwater runoff for the protection of waterways and sensitive areas in the City of San Dimas.

ARTICLE I. TITLE, FINDINGS, PURPOSE

Section 1.01 Title

This ordinance shall be known as the "City of San Dimas Low Impact Development (LID) Ordinance" and may be so cited.

Section 1.02 Findings

The City of San Dimas (hereinafter referred to as "City") finds that:

- Waterbodies, roadways, structures, and other property within and downstream of the City are at times subject to flooding.
- Land development alters the hydrologic response of watersheds, resulting in increased stormwater runoff rates and volumes, increased flooding, increased stream channel erosion, increased sediment transport and deposition, and increased nonpoint source pollutant loading to the receiving waterbodies and the beaches.
- Stormwater runoff produced by land development contributes to increased quantities of waterborne pollutants.
- Increases of stormwater runoff, soil erosion, and non-point source pollution have occurred as a result of land development, and have impacted the water resources of the San Gabriel River Watershed.
- Increase stormwater runoff rates and volumes and the sediments and pollutants associated with stormwater runoff from future development projects within the City will, absent proper regulation and control, adversely affect the City's waterbodies and water resources, and those of downstream municipalities.
- Stormwater runoff, soil erosion, and non-point source pollution can be controlled and minimized by the regulation of stormwater runoff from development.
- Adopting the standards, criteria, and procedures contained in this ordinance and implementing the same will address many of the deleterious effects of stormwater runoff.

Section 1.03 Purpose

It is the purpose of this ordinance to establish minimum stormwater management requirements and controls to accomplish, among others, the following objectives:

- (1) Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing communities via infill or redevelopment, and safeguarding of environmentally sensitive areas.
- (2) Minimize the adverse impacts from stormwater runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of waterbodies.
- (3) Minimize the percentage of impervious surfaces on land developments by minimizing soil compaction during construction, designing projects to minimize the impervious area footprint, and employing Low Impact Development (LID) design principles to mimic predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use.
- (4) Maintain existing riparian buffers and enhance riparian buffers when possible.
- (5) Minimize pollutant loadings from impervious surfaces such as roof tops, parking lots, and roadways through the use of properly designed, technically appropriate Best Management Practices (BMPs),

(including Source Control BMPs such as good housekeeping practices), LID Strategies, and Treatment Control BMPs.

- (6) Properly select, design and maintain LID and Hydromodification Control BMPs to address pollutants that are likely to be generated, reduce changes to pre-development hydrology, assure long-term function, and avoid the breeding of vectors.
- (7) Prioritize the selection of BMPs to remove stormwater pollutants, reduce stormwater runoff volume, and beneficially use stormwater to support an integrated approach to protecting water quality and managing water resources in the following order of preference:
 - (a) On-site infiltration, bioretention and/or rainfall harvest and use.
 - (b) On-site biofiltration, off-site ground water replenishment, and/or off-site retrofit.

Section 1.04 Construction of Language

For purposes of this Ordinance, the following rules of construction apply:

- A. Terms not specifically defined in this Ordinance shall have the meaning customarily assigned to them.
- B. Considering that stormwater management in many cases requires sophisticated engineering design and improvements, some of the terms of this Ordinance are complex in nature. Effort has been made to simplify terms to the extent the subject matter permits.

ARTICLE II: DEFINITIONS

Section 2.01 Definition of Terms

The following terms, phrases, words, and derivatives shall have the meaning defined below:

"Applicant" means any person proposing or implementing the development of land.

"Beneficial uses" means the existing or potential uses of receiving waters in the permit area as designated by the Regional Water Board in the Basin Plan.

"BMP or best management practice" means a practice, or combination of practices and design criteria that comply with the California Association of Stormwater Quality (CASQA) Guidebook of BMPs or equivalent practices and design criteria that accomplish the purposes of this Ordinance (including, but not limited to minimizing stormwater runoff and preventing the discharge of pollutants into stormwater) as determined by the City Engineer, Environmental Coordinator, City's consultant (and/or, where appropriate, the standards of the General Plan).

"City" means the City of San Dimas

"Conveyance facility" means a storm drain, pipe, swale, or channel used to collect and direct stormwater.

"Design engineer" means the registered professional engineer responsible for the design of the stormwater management plan.

"Detention system" means a system which is designed to capture stormwater and release it over a given period of time through an outlet structure at a controlled rate.

"Development" means any construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade,

hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

"Engineered site grading plan" means a sealed drawing or plan and accompanying text prepared by a registered engineer or landscape architect which shows alterations of topography, alterations of watercourses, flow directions of stormwater runoff, and proposed stormwater management and measures which is prepared to ensure that the objectives of this Ordinance are met.

"Environmentally sensitive area (ESA)" means an area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments (California Public Resources Code § 30107.5). Areas subject to storm water mitigation requirements are: areas designated as Significant Ecological Areas by the County of Los Angeles (Los Angeles County Significant Areas Study, Los Angeles County Department of Regional Planning (1976) and amendments); areas designated as a Significant Natural Area by the California Department of Fish and Wildlife's Significant Natural Areas Program, provided that areas have been field verified by the Department of Fish and Wildlife; areas listed in the Basin Plan as supporting the "Rare, Threatened, or Endangered Species (RARE)" beneficial use; and areas identified by the City of San Dimas as environmentally sensitive.

"Grading" means any stripping, excavating, filling, and stockpiling of soil or any combination thereof and the land in its excavated or filled condition.

"Hillside" means any property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is on average 25% or greater and where grading contemplates cut or fill slopes. For the purposes of this Ordinance the average slope of a parcel to be subdivided shall be determined according to the formula:

$$S = \frac{.00229}{A} IL$$

where:

1. "S" is the average slope in percent;
2. "I" is the contour interval in feet;
3. "L" is the combined length of contour lines in scale feet within the parcel; and
4. "A" is the area in acres of the parcel to be subdivided.

"Impervious surface" means a surface that does not allow stormwater runoff to slowly percolate into the ground.

"Infiltration" means the percolation of water into the ground, expressed in inches per hour.

"Maintenance agreement" means a binding agreement that sets forth the terms, measures, and conditions for the maintenance of stormwater systems and facilities.

"Natural drainage system" means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system.

"Offsite facility" means all or part of a drainage system that is located partially or completely off the development site which it serves.

"Peak rate of discharge" means the maximum rate of stormwater flow at a particular location following a storm event, as measured at a given point and time in cubic feet per second (CFS).

“Plan” means written narratives, specifications, drawings, sketches, written standards, operating procedures, or any combination of these which contain information pursuant to this Ordinance.

“Retention” means a holding system for stormwater, either natural or man-made, which does not have an outlet to adjoining watercourses or wetlands and in which water is removed through infiltration and/or evaporation processes.

“Runoff” means the portion of precipitation which flows over the land. During dry weather it is typically comprised of base flow (either contaminated with pollutants or uncontaminated) and nuisance flow.

“Sediment” means mineral or organic particulate matter that has been removed from its site of origin by the processes of soil erosion, is in suspension in water, or is being transported.

“A significant ecological area (SEA)” means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity for the purpose of protecting biotic diversity as part of the Los Angeles County General Plan.

“Storm drain” means a conduit, pipe, swale, natural channel, or man-made structure which serves to transport stormwater runoff. Storm drains may be either enclosed or open.

“Stormwater BMP (Best Management Practice)” means any facility, structure, channel, area, process or measure which serves to control stormwater runoff in accordance with the purposes and standards of this Ordinance. Also see BMP or Best Management Practice.

“Stormwater Quality Design Volume (SWQDv)” means the runoff from:

- a. The 0.75-inch, 24-hour rain event or
- b. The 85th percentile, 24-hour rain event, as determined from the Los Angeles County 85th percentile precipitation isohyetal map, whichever is greater.

“Swale” means a defined contour of land with gradual slopes that transport and direct the flow of stormwater.

“Watercourse” means any natural or manmade waterway or other body of water having reasonably well defined banks. Rivers, streams, creeks, brooks, and channels, whether continually or intermittently flowing, as well as lakes and ponds are watercourses for purposes of stormwater management.

“Watershed” means an area in which there is a common outlet into which stormwater ultimately flows, otherwise known as a drainage area.

“Wetlands” means land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support wetland vegetation or aquatic life and is commonly referred to as a bog, swamp, or marsh, as defined by state law.

ARTICLE III. NEW DEVELOPMENT AND REDEVELOPMENT PROJECT PROVISIONS

Section 3.01 Applicability

These procedures and standards set forth in this Ordinance and the BMP design information found in the Los Angeles County Municipal Storm Water Permit Order No. R4-2012-0175, and any amendment, revision, or reissuance thereof provide minimum standards to be complied with by developers and in no way limit the authority of the City of San Dimas to adopt or publish and/or enforce higher standards as a condition of approval of developments.

A. New Development Projects

Development projects subject to City conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution prior to completion of the project(s) include:

- (a) All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area.
- (b) Industrial parks 10,000 square feet or more of surface area.
- (c) Commercial malls 10,000 square feet or more surface area.
- (d) Retail gasoline outlets 5,000 square feet or more of surface area.
- (e) Restaurants 5,000 square feet or more of surface area.
- (f) Parking lots 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.
- (g) Street and road construction of 10,000 square feet or more of impervious surface area shall follow the City of San Dimas Green Streets Policy to the maximum extent practicable. Street and road construction applies to streets, roads, highways, and freeway projects, and also applies to streets within larger projects.
- (h) Automotive service facilities (*as referenced by standard industrial classifications in the Los Angeles County Municipal Storm Water Permit Order No. R4-2012-0175, and any amendment, revision, or reissuance thereof*) 5,000 square feet or more of surface area.
- (i) Redevelopment projects in subject categories that meet Redevelopment thresholds identified in Part B (Redevelopment Projects) below.
- (j) Projects located in or within 200ft of, or discharging directly to a Significant Ecological Area (SEA), *such as: San Dimas Canyon / San Antonio Wash* where the development will:
 - i. Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
 - ii. Create 2,500 square feet or more of impervious surface area
- (k) Single-family hillside homes. During the construction of a single family hillside home, the following measures shall be considered to the maximum extent practicable:
 - i. Conserve natural areas.
 - ii. Protect slopes and channels.
 - iii. Provide storm drain system stenciling and signage.
 - iv. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability.
 - v. Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability.

B. Redevelopment Projects

Redevelopment projects subject to conditioning and approval requirements outlined in this Ordinance for the design and implementation of post-construction controls to mitigate stormwater pollution prior to completion of the project(s) include:

- (a) Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site
 - i. Redevelopment projects that result in an alteration to more than fifty (50) percent of impervious surfaces of an existing development which had not been not subject to post-construction stormwater quality control requirements at the time of the previous development shall be required to mitigate the entire project site
 - ii. Redevelopment projects that result in an alteration of less than fifty (50) percent of impervious surfaces of an existing development, which had not been subject to post-construction stormwater quality control requirements at the time of the previous development shall be required to mitigate only the alteration and shall not be required to mitigate the entire development
 - iii. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.
 - iv. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

Section 3.02 Project Performance Criteria

All development projects that fit the project criteria listed above in Section 3.01 of this ordinance shall control pollutants, pollutant loads, and runoff volume by retaining the Stormwater Quality Design Volume (SWQDV) (as defined above) on-site through:

1. Minimizing the impervious surface area; and
2. Controlling runoff from impervious surfaces through infiltration, bioretention and/or rainfall harvest and use.

Section 3.03 Alternative Compliance for Technical Infeasibility

To demonstrate technical infeasibility, the project applicant shall demonstrate to the City Engineer that the project cannot reliably retain 100 percent of the SWQDV on-site, even with the maximum application of green roofs and rainwater harvest and use, and that compliance with the applicable post-construction requirements would be technically infeasible. This shall be demonstrated by submitting a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer and shall be subject to review and approval by the City Engineer.

When evaluating the potential for on-site retention, each applicant shall consider the maximum potential for evapotranspiration from green roofs and rainfall harvest and use.

Alternative compliance measures include the following:

- (1) On-site Biofiltration – Biofiltration systems shall meet the design specifications provided in Attachment H of the Los Angeles County Municipal Storm Water Permit Order No. R4-2012-0175, and any amendment, revision, or reissuance thereof. If using biofiltration due to demonstrated technical infeasibility, then the new project must biofiltrate 1.5 times the portion of the SWQDV that is not reliably retained on-site, as calculated by Equation 1 below:

Equation 1:

$$Bv = 1.5 * [SWQDv - Rv]$$

Where:

Bv = biofiltration volume

SWQDv = the stormwater runoff from a 0.75 inch, 24-hour storm or the 85th percentile storm, whichever is greater.

Rv = volume reliably retained on-site

- (2) Offsite Infiltration – Use infiltration or bioretention BMPs to intercept a volume of stormwater runoff equal to the SWQDv, less the volume of stormwater runoff reliably retained on-site, at an approved offsite project. The required offsite mitigation volume shall be calculated by Equation 2 below:

Equation 2:

$$Mv = 1.0 * [SWQDv - Rv]$$

Where:

Mv = mitigation volume

SWQDv = runoff from the 0.75 inch, 24-hour storm event or the 85th percentile storm, whichever is greater

Rv = the volume of storm water runoff reliably retained on-site.

- (3) Offsite Project - Retrofit Existing Development – Use infiltration, bioretention, rainfall harvest and use and/or biofiltration BMPs to retrofit an existing development, with similar land uses as the new development or land uses associated with comparable or higher stormwater runoff event mean concentrations (EMCs) than the new development. The retrofit plan shall be designed and constructed as described in the Los Angeles County Municipal Storm Water Permit Order No. R4-2012-0175, and any amendment, revision, or reissuance thereof.
- (4) Other alternative compliance requirements are detailed in the Los Angeles County Municipal Storm Water Permit Order No. R4-2012-0175.

Applicants and/or designers may select any combination of stormwater BMPs which meet the performance standards provided in this selection and identified in the Los Angeles County Municipal Storm Water Permit Order No. R4-2012-0175 and any amendment, revision, or reissuance thereof.

ARTICLE IV. PLAN REVIEW REQUIREMENTS, FEES, AND MAINTENANCE

Section 4.01 Review Procedures

A. All Stormwater Plans shall be subject to review and approval by the City Engineer.

1. If the proposed plan is not sufficient as originally submitted, the City Engineer, or his/her designee, will notify the applicant in writing, setting forth the reasons for withholding a recommendation for approval, and will state the changes necessary to obtain approval.
2. If Staff determines that all of the required information has not been received, the proprietor may request that the matter be tabled to allow for the submittal of the required information.
3. If all of the required information has been received, Staff shall recommend approval, recommend approval with conditions, or recommend denial of the Stormwater Plan, including

waiver submissions. Recommendations for action on the Stormwater Plan can be part of the recommendation for action on the site plan or subdivision plat.

4. If the plan is approved, the City will require the following:

- a. The applicant shall provide copies of all necessary state, federal, or local permits relating to stormwater management to the City.
- b. A satisfactory maintenance covenant agreement that assures long-term maintenance of all drainage improvements shall be submitted as part of the final plan. The maintenance covenant shall include a listing of the BMP's and their location and required maintenance frequency. The property owner shall be required to document proper maintenance and operations and maintain such records for a period of two (2) years. Maintenance agreements and records shall be provided upon request to the City inspector at any time for compliance verification. Failure to do so will result in enforcement actions per the City Code. The approved covenant shall be recorded with the Los Angeles County Recorder prior to issuance of occupancy.

A satisfactory maintenance covenant shall at a minimum include the developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred; and either:

- A signed statement from the public entity assuming responsibility for BMP maintenance; or
 - Written conditions in the sales or lease agreement, which require the property owner or tenant to assume responsibility for BMP maintenance and conduct a maintenance inspection at least once a year; or
 - Written text in project covenants, conditions, and restrictions (CCRs) for residential properties assigning BMP maintenance responsibilities to the Home Owners Association; or
- c. The applicant shall post cash or a letter of credit in an amount not less than ___ percent of the cost of the stormwater facilities for projects of less than \$ _____ or ___ percent of the cost for projects over \$ _____. This deposit shall be held for two (2) years after the date of completion of construction and final inspection of the stormwater facilities, or until construction on all phases in the development are completed, whichever time period is longer.
 - d. This deposit shall be returned to the applicant (in the case of cash) or allowed to expire (in the case of a letter of credit), as provided above, provided all stormwater facilities are clean, unobstructed, and in good working order, as determined by the City Engineer.
 - e. Reproducible mylars and electronic files (in AutoCAD format) of the as-built storm drains and stormwater BMPs shall be submitted by the applicant or his/her engineer to the City along with the final plan, or upon completion of system construction. The mylars are to be of quality material and three mils in thickness. Complete development agreements (including deed restrictions) must be submitted for the City's review and approval prior to recording.

Section 4.02 Review Fees

Fees and escrow account payments shall be sufficient to cover administrative and technical review costs anticipated to be incurred by the City of San Dimas including the costs of on-site inspections.

Section 4.03 Maintenance Agreement

A. Purpose of Maintenance Agreement

The purpose of the maintenance agreement is to provide the means and assurance that maintenance of stormwater BMPs shall be undertaken.

B. Maintenance Agreement Required

1. A maintenance agreement shall be submitted to the City, for review by the City Engineer and his/her designee and, if necessary, City Attorney. The Designers may select any combination of stormwater BMPs which meet the performance standards provided this selection and identified in the Los Angeles County Municipal Storm Water Permit Order No. R4-2012-0175 and any

amendment, revision, or reissuance thereof. A formal maintenance plan shall be included in the maintenance agreement.

C. Maintenance Agreement Provisions

1. The maintenance agreement shall include a plan for routine, emergency, and long-term maintenance of all stormwater BMPs, with a detailed annual estimated budget for the initial two (2) years, and a clear statement that only future maintenance activities in accordance with the maintenance agreement plan shall be permitted without the necessity of securing new permits. Written notice of the intent to proceed with maintenance shall be provided by the party responsible for maintenance to the City of San Dimas at least 14 days in advance of commencing work.
2. The maintenance agreement shall be binding on all subsequent owners of land served by the stormwater BMPs.
3. If it has been found by the City, following notice and an opportunity to be heard by the property owner, that there has been a material failure or refusal to undertake maintenance as required under this ordinance and/or as required in the approved maintenance agreement as required hereunder, the City shall abate such violations, as a public nuisance, pursuant to the procedures set forth in Chapter 8.16 of the municipal code. (Ord. 1011 § 1 (part), 1994).

A fully executed "Maintenance Covenant for permanent BMP's Requirements" shall be recorded with the L.A. County Registrar/Recorder and submitted to the Public Works Department prior to the Certificate of Occupancy. Covenant documents shall be required to include an exhibit that details the installed treatment control devices as well as any site design or source control Best Management Practices (BMPs) for post construction. The information to be provided on this exhibit shall include, but not be limited to:

- 8 ½" x 11" exhibits with record property owner information.
- Types of BMPs (i.e., site design, source control and/or treatment control) to ensure modifications to the site are not conducted without the property owner being aware of the ramifications to BMP implementation.
- Clear depiction of location of BMPs, especially those located below ground.
- A matrix depicting the types of BMPs, frequency of inspection, type of maintenance required, and if proprietary BMPs, the company information to perform the necessary maintenance.
- Agreement to retain documentation of proper maintenance for a period of two (2) years.
- Understanding that documentation of proper maintenance must be presented to the City upon request.

ARTICLE V ENFORCEMENT

Any person violating any provision of this ordinance shall be responsible for a municipal civil infraction and subject to the City's progressive enforcement policy as detailed in the City Code.

Section 5.01 Stop Work Order

Where there is work in progress that causes or constitutes in whole or in part, a violation of any provision of this Ordinance, the City is authorized to issue a Stop Work Order so as to prevent further or continuing violations or adverse effects. All persons to whom the stop work order is directed, or who are involved in any way with the work or matter described in the stop work order shall fully and promptly comply therewith. The City may also undertake or cause to be undertaken, any necessary or advisable protective measures so as to prevent violations of this ordinance or to avoid or reduce the effects of noncompliance herewith. The cost of any such protective measures shall be the responsibility of the owner of the property upon which the work is being done and the responsibility of any person carrying out or participating in the work.

Section 5.02 Failure to Comply; Completion

In addition to any other remedies, should any owner fail to comply with the provisions of this Ordinance, the City may, after the giving of reasonable notice and opportunity for compliance, have the necessary work done, and the owner shall be obligated to promptly reimburse the City for all costs of such work.

Section 5.03 Emergency Measures

When emergency measures are necessary to moderate a nuisance, to protect public safety, health and welfare, and/ or to prevent loss of life, injury or damage to property, the City is authorized to carry out or arrange for all such emergency measures. Property owners shall be responsible for the cost of such measures made necessary as a result of a violation of this Ordinance, and shall promptly reimburse the City for all of such costs.

Section 5.04 Cost Recovery for Damage to Storm Drain System

A discharger shall be liable for all costs incurred by the City as the result of causing a discharge that produces a deposit or obstruction, or causes damage to, or impairs a storm drain, or violates any of the provisions of this Ordinance. Costs include, but are not limited to, those penalties levied by the Environmental Protection Agency or Los Angeles Regional Water Quality Control Board for violation of an NPDES permit, attorney fees, and other costs and expenses.

